

SPOT BLASTER OPERATION GUIDE



Mfg. to ATD specifications by

ALC

DIVISION OF S&H INDUSTRIES

WARNING!

Do not use an ATD Spot Blaster until you have read this manual and you understand its contents and warnings. These warnings are included for the health and safety of the operator and those in the immediate vicinity. Keep this manual for future reference.

Dust created by power sanding, sawing, grinding, drilling, and other construction activities may contain chemicals known to cause cancer, birth defects or other reproductive harm and respiratory illnesses. Some examples of the chemicals include:

- Lead from lead based paints
- Crystalline silica from bricks, cement and other masonry products
- Arsenic and chromium from chemically-treated lumber

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

Abrasive blasting produces harmful dust. Everyone in the blasting area must wear a properly fitted and properly maintained NIOSH-approved supplied-air respirator.

SILICOSIS AND OTHER DUST WARNINGS:

Breathing dust from silica sand may cause silicosis, a fatal lung disease. Breathing dust during blasting operations may also cause asbestosis and/or other serious or fatal diseases. A NIOSH-approved, well-maintained air-supplied abrasive blasting respirator must be used by anyone blasting, anyone handling or using media containing toxic substances or media with more than one percent free crystalline silica and anyone in the area of the dust. Harmful dust can remain suspended in the air for long periods of time after blasting has ceased, causing serious injury or death.

Before removing respirator, use an air monitoring instrument to determine if atmosphere is safe to breathe. Contact local OSHA or NIOSH office to determine the proper respirator for your particular application.

Supplied-Air respirators do not remove or protect against carbon monoxide (CO) or any other toxic gas. Use a carbon monoxide removal device and monitoring device with the respirator to ensure grade D quality air. Follow all applicable OSHA standards and OSHA regulation 1910.134 (d).

OPERATION GUIDE SAFETY PROCEDURES

Use of safety goggles, face shield or protective hood is recommended. Never point the blast gun at anyone. Although the vacuum action of the 84703 will collect most of the abrasive material, it is possible that some of the media or blasted material could fly about and cause injury if proper techniques are not used.

SPOT BLASTER SAFETY PROCEDURES

**CAUTION: READ THESE SAFETY procedures IN THEIR ENTIRETY –
PARTS OF THE OPERATING INSTRUCTIONS ARE WITHIN THESE WARNINGS.**

These procedures are not intended to be exhaustive due to the many variables in the abrasive blasting field. Therefore, we INSIST that the hands, ears, mouth, nose and eyes be covered with appropriate safety protection at all times.

ADDITIONAL WARNINGS! CAUTION MUST BE EXERCISED BY USER AT ALL TIMES

1. **Everyone in the blast area including the equipment operator should correctly use and maintain a NIOSH-approved air-supplied respirator, even after blasting has ceased. Harmful dust can remain suspended in the air for long periods of time after blasting has ceased causing injury or death.**
2. **Before using the pressure blaster: Put on eye protection, gloves, and NIOSH-approved respirator. Always wear these protective items when operating and while servicing your abrasive blaster. A well maintained air supplied blasting respirator must be used by anyone blasting.**
3. **Use thick gloves with gauntlets to protect your hands.**
4. **Use backboards to prevent overspray from hitting someone or something else because the dust will travel a long distance. Blast in a large open area to minimize abrasive accumulation in surrounding areas**
5. **For safe operation, perform recommended preventive maintenance on blaster, remote unit and accessories. Replace all worn parts before they fail. Immediate replacement of worn components is required. Failure to replace worn components could result in exposing the operator or bystanders to high speed media and compressed air, causing serious injury.**
6. **Do not use corrosive materials of any type in unit. Use only clean, dry media.**
7. **Do not splice abrasive hose. The splice will wear out quickly and may violently spray media over the surrounding area. A worn blast hose could suddenly fail by bursting.**

Couplings and nozzle holders may not adequately grip worn hose, causing them to blow off under pressure. Compressed air and abrasive escaping from a burst hose, or disconnected coupling or nozzle holder, could cause severe injury.

8. **Always place the machine so that the outlet is pointed away from any objects or persons. Stand clear of the path of exiting abrasive. It may come out at high velocity. Impact from exiting abrasive could cause severe injury.**
9. **Static electricity can be created by the use of this equipment. Do not use within fifty feet of any explosive, potentially explosive substances, or their vapors as an explosion can occur.**
10. **Do not use this equipment in any area that might be considered hazardous or where flammable gases or liquids are present. Failure to do so may cause an explosion resulting in serious injury.**

OPERATION

1. Your 84703 spot blaster is pre-assembled. Mount a 1/4" NPT air connector (not included) on the blast gun.
2. Fill the abrasive bag with 2-3" of media.
3. Connect air line and you are ready for blasting.
4. Press the rubber workhead flush to the surface so that as you blast you can feel the rubber tip "float" along. The blast gun can be moved slowly in any direction, keeping the workhead on the blast surface. You may want to guide the rubber workhead with your hand.
5. During blasting, media is pulled back into the abrasive bag by the vacuum created by the air and workhead pressing against the blast surface.
6. Abrasive recommended for Model 84703 is steel grit, black beauty, plastic or any synthetic media.
7. When using glass beads, clean dust from bag every 1/2 hour. This is because the bag collects dust and cannot breathe.
8. Recommended air pressure is 20 CFM at 80-110 PSI. Minimum 7 CFM compressor.

WARNING!

Disconnecting hose while unit is under pressure could cause serious injury or death. Use safety lock pins and safety cables in all coupling connections to help prevent hose couplings from accidental disconnection.

If twist-on type air hose couplings are used, they must be secured by safety lock pins or wires to prevent accidental disconnection while under pressure. Hose disconnection while under pressure could cause serious injury.

MAINTENANCE

Periodically disassemble the **84703** to see if the nozzle needs to be replaced. Also check the wear on the air jet. The ratio of wear is one air jet to every three or four nozzles. If air jet and nozzle are not replaced when worn, the suction head will become damaged. – also fix on 40012.

DISASSEMBLY OF MODEL 84703

1. To disassemble Model **84703** Spot Blaster, remove rubber tip, clamp and bag, siphon tube and master adapter set screw.
2. Loosen second set screw and remove siphon head.
3. The nozzle is easily replaced by loosening the nozzle set screw. The air jet is accessible by removing the suction head. When re-assembling the blast gun, ensure that the suction head is holding the air jet and rubber sealing washer tightly against the gun body. Tighten the set screw securely.

Abrasive (Media) Usage:

1. If moisture is in the media, it will eventually damage the blaster tank or plug the system. Keep the media and compressor air dry to avoid this problem.
2. If the media is moist, screen it and dry it before using.
3. Do not leave media in the tank after blasting because it can absorb moisture and impair blasting performance.
4. Store media in a dry place; keep media off the ground or concrete floors. Put is on a wooden skid.
5. If the humidity is excessively high it may not be advisable to blast at that time.
6. Consider using different grades or different types of media to prevent nozzle clogging due to high moisture content.
7. Do not use sand.

ABRASIVE AND PRESSURE GUIDE					
Material to Be Cleaned	Air Pressure	Abrasive		Grit Size	
Steel vats	100-125 psi	Black magnum	10898	30/50	20/40
Auto fenders	50-80 psi	Black magnum	10898	80/120	20/40
Brick and block	80-125 psi	Black magnum	10898	30/50	20/40
Steel cabinets	80-125 psi	Black magnum	10898	30/50	20/40
Truck bodies	100-125 psi	Black magnum	10898	30-50	20/40
Glass etching	50-70 psi	Glass beads	Silicon carbide	30/40	100
Wood	50-70 psi	Nut shells	Glass beads	14/30	30/40

Black Beauty #40093

Black Beauty is used when paint and rust has to be removed from steel, such as car bodies, tanks or heavy machinery. Black Beauty is superior to silica because it only has .1% free silica, is faster cutting, can be re-used, is moisture free, and will not pack or absorb moisture. (25 Lb. container)

Steel Grit #40109

Steel grit is extremely fast cutting on rusty metal and hard to remove paint. Steel Grit is popular because it leaves a very smooth finish. It is also comparable in price to most other specialty abrasives. Steel Grit is recommended in reclaim systems or cabinets. (25 Lb. container)

Glass Bead #40105

Glass Bead is used in creating a satin or matte finish. Glass Bead is recommended in reclaim systems or cabinets. (25 Lb. container)

Aluminum Oxide #40098

Aluminum Oxide is a high quality abrasive that is sharper than sand (not recommended) and cuts twice as fast as sand. It leaves a smooth textured finish with no pits or burrs. Aluminum Oxide is rougher than glass bead and can be used over and over again. It is one of the most economical abrasives you can use in any reclaim systems or cabinets. (4/25 Lb. container)

Plastic Grit #40110

Primarily used to strip aluminum and fiberglass. Great for stripping paint, light oxidation and surface rust. Recommended for use in blast cabinets because it creates very little dust. Works quickly, last a long time and increases visibility within the cabinet. (10 Lb. container)

Walnut Shells #40112

Walnut shells are recommended for use on "soft" surfaces such as aluminum, glass, wood, and other areas where no pitting is desired. Leaves a smooth, dull finish. (10 Lb. container)

TROUBLESHOOTING TIPS**PROBLEM/CAUSE****POSSIBLE SOLUTION****Surging of blast flow:**

Air pressure too low
Too much media

Check pressure gauge on compressor

Excessive media consumption:

Media valve open too far
Air pressure too low

Check pressure gauge on compressor

Clogging and plugging of blast flow:

Debris in media
Media size too large
Nozzle plugs
Nozzle plugs
Wet media

Purge and screen
Use smaller grit size
Use larger nozzle
Adjust media valve 40200
Dry media, drain water from air

Moisture in abrasive media:

Wet media
Water in air
Water in tank

Change or use dry media
Drain water from air lines
Empty, dry out and refill

Humid weather:

Moderate humidity
Moderate humidity
High humidity

Keep media as dry as possible
Use drier or moisture separator
Avoid that period of use if possible

Overtaxed compressor:

Compressor too small
Nozzle size too large
Too many leaks in plumbing
Holes in abrasive hose
Air filter on compressor plugged

Restrict time used
Use smaller size
Seal and tighten plumbing
Replace hose
Clean

Lack of air pressure:

Compressor too small
Supply valves not on full position
Nozzle size too large
Leaks in plumbing
Holes in abrasive hose
Air filter on compressor plugged
Urethane gasket worn or dirty

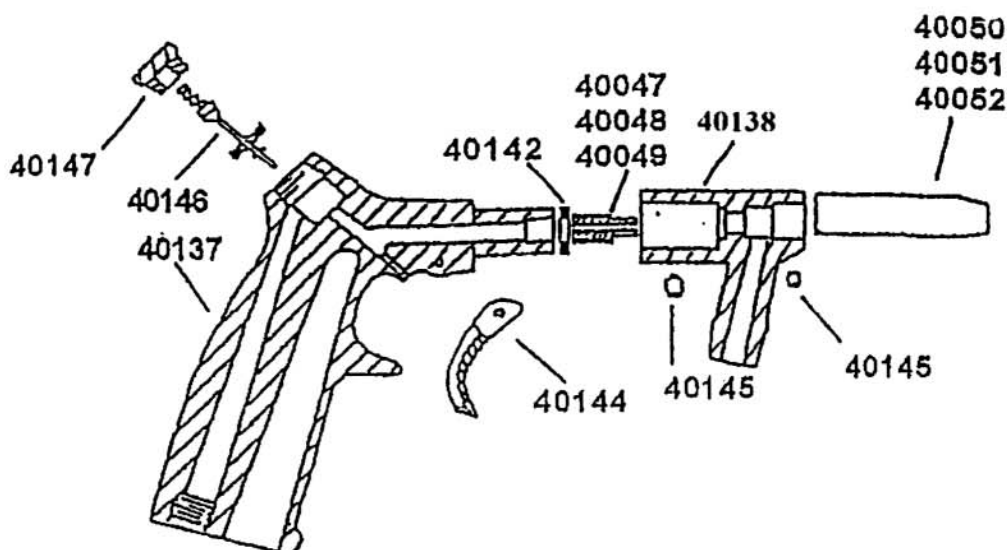
Use smaller nozzle
Open valves
Use smaller size
Seal and tighten plumbing
Replace hose
Clean filter
Clean or replace gasket

Lack of abrasive flow:

Blaster tank empty
Moisture in media
Not enough air pressure
Abrasive hose kinked
Debris in media

Fill tank
Dry media
Check system
Straighten hose

Clean or screen media

REPLACEMENT PARTS AND OPTIONAL ACCESSORIES

REPLACEMENTS PARTS

Part No.	Description
40135	Blast gun body (equipped with 5/16" ceramic nozzle, 5/32" air jet)
40137	Blast gun handle only with trigger and valve
40139	Blast gun siphon head with nozzle and air jet
40142	Washer
40144	Blast gun trigger
40145	Blast gun set screw
40146	Blast gun valve, spring and seat assembly
40147	Valve nut
40081	General purpose round assembly
40132	Master adapter
40134	Siphon tube
40131	Abrasive and recovery bag
11079	1-1/2" black cap
40133	Clamp
40058	5/16" ceramic nozzle, 20 CFM @ 80 PSI
40049	5/32" air jet

OPTIONAL ADAPTERS

40082	Edge adapter
40083	Outside corner adapter
40084	Inside corner adapter
40085	1/2" spot adapter

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LIMITED WARRANTY

S & H Industries, Inc. warrants this product to be free from defects in materials or workmanship for two years after the date of original purchase.

If the product should become defective within that warranty period, we will repair or replace it (at our option) free of charge including return transportation to you provided you deliver it prepaid to S & H Industries, Inc., 5200 Richmond Road, Bedford Hts., Ohio 44146.

This warranty does not include damage resulting from accident, abuse or misuse of the product. Nor does it apply to parts subject to abrasive wear, i.e., nozzles, air jets, seal blocks, valves, hose connections and hoses.

Implied warranties including those of merchantability and fitness for a particular purpose are excluded to the extent permitted by law, and any and all implied warranties are excluded. This is the exclusive remedy and liability for consequential damages under any and all warranties are excluded to the extent exclusion is permitted by law.